

Naintsch Mineralwerke GmbH, a - 8046 Graz - Austria - Tel. +43 (0316) 693650 - Fax +43 (0316) 693665

Encl = 5/15/02

**NAINTSCH**

**DATA SHEET****NAINTSCH A-3**

Naintsch A-3 is an extremely pure, very white talc. With its high aspect ratio and ultrafine grind, it improves nucleation in crystalline polymers.

**WHITENESS**

Minolta CR-300  
Illuminant D65/2°

Y .....	93.0
CIE	
L° .....	97.2
a° .....	0.0
b° .....	0.8

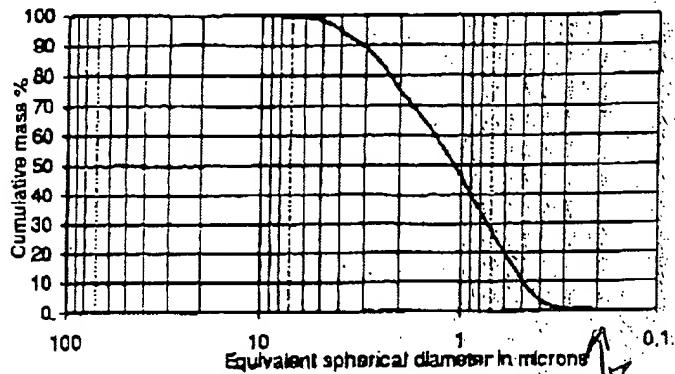
**PARTICLE SIZE DISTRIBUTION**

Screen residue  
Alpine Airjet

> 15 µm ..... 0.03 %

Sedigraph 5100

→ | d<sub>50</sub> ..... 1.2 µm  
d<sub>95</sub> ..... 4.4 µm | ←

**Sedimentation****SPECIFIC SURFACE (EA)**

Blaine 10  
DIN 66131/2

Blaine ..... 50000  
BET ..... 14.5 m<sup>2</sup>/g

**CHEMICAL ANALYSIS**

Colorimetry  
AAS

SiO <sub>2</sub> .....	62.0 %
MgO.....	31.5 %
Al <sub>2</sub> O <sub>3</sub> .....	0.4 %
Fe <sub>2</sub> O <sub>3</sub> .....	0.2 %
CaO.....	0.3 %
.....	6.0 %
.....	0.9 %

Loss on ignition 1050 °C  
625 °C

**PHYSICAL PROPERTIES**

ISO 787/10  
ISO 787/11  
DIN 52110  
Mohs' scale  
ISO 787/2

Specific gravity .....	2.78 g/cm <sup>3</sup>
Tapped bulk density .....	0.20 g/cm <sup>3</sup>
Loose bulk density .....	0.17 g/cm <sup>3</sup>
Hardness .....	1
Moisture content (105 °C) .....	≤ 0.4 %

Producer: IMI FABI S.p.A.

**HiTalc Premium HTP ultra 5c**

<b>Mineralogy</b>		Thermogravimetric and X-ray Diffraction												
<i>Laminar</i>	Talc	99-100	%											
	Chlorite	traces	%											
<i>Granular</i>	Dolomite	< 1	%											
	Quartz	< 0,5	%											
<i>Fibrous</i>	Asbestos	not detected												
	Tremolite	not detected												
<b>Brightness</b>		Minolta CR 300	97	CIE L										
			0,10	a*										
			0,40	b*										
			93	Y										
<b>Particle Size Distribution</b>		Sedigraph 5100												
		<p>The graph shows the percentage of material finer than a given particle size (y-axis, 0-100) versus particle size in microns (x-axis, logarithmic scale from 0.01 to 100). A curve starts at approximately (0.1, 10) and rises steeply, leveling off around 90% at 10 microns.</p> <table border="1"> <thead> <tr> <th>Microns</th> <th>% finer than</th> </tr> </thead> <tbody> <tr><td>0.1</td><td>10</td></tr> <tr><td>1</td><td>50</td></tr> <tr><td>10</td><td>90</td></tr> <tr><td>100</td><td>99</td></tr> </tbody> </table>	Microns	% finer than	0.1	10	1	50	10	90	100	99	99	% < 5 µm
Microns	% finer than													
0.1	10													
1	50													
10	90													
100	99													
			92	% < 2 µm										
			75	% < 1 µm										
<b>Chemical Analysis</b>														
	SiO <sub>2</sub>	61,5	%											
	MgO	31	%											
	CaO	0,5	%											
	Fe <sub>2</sub> O <sub>3</sub>	0,7	%											
	Al <sub>2</sub> O <sub>3</sub>	0,4	%											
<b>Loss on ignition</b>	1050 °C	5,7	%											
<b>Hardness</b>	Talc	1	Mohs											
<b>Abrasivity</b>	Einlechner AT 1000	2	mg											
<b>Refractive Index</b>		1,6												
<b>pH</b>	10 % aqueous solution	9												
<b>Moisture</b>	105 °C	0,5	max.%											

The data presented herein are believed to be typical for production. They are based on most recent testing. This information should be used as a guide. No warranty, expressed or implied, is made as to suitability. The user is solely responsible for the use of this product. 12/99

Marketing : HiHolding GmbH

A-8045 Graz, Austria, P.B. 60

Nepomukgasse 21

+43-316-682072 fax : +43 316-6920724

# Talk Naintsch ST

Talk Naintsch ST ist ein natürliches Gemenge von Magnesiumsilikathydrat und Magnesiumaluminumsilikathydrat mit ausgeprägter Plättchenstruktur (hohes Aspektverhältnis).

## Mineralogische Daten

## Chemische Daten

## Physikalische Daten

ST-10 : 0.62 D4 / 1/4

ST-60 : 0.40 D4 / 1/4

ST-7 : Sie2 für Isolierstoff  
Produkt

### Talk/Chlorit

### Chemische Analyse (%)

SiO <sub>2</sub>	48
MgO	30
Al <sub>2</sub> O <sub>3</sub>	10,5
Fe <sub>2</sub> O <sub>3</sub>	2
Glühverlust (1050 °C, 1h)	9
Säurelöslichkeit (%) (HCl 1%, 20 °C, 20 min.)	2
pH-Wert DIN ISO 787/9	9

### Härte (Mohs)

Talk	1
Chlorit	1-2

Dichte (kg/dm <sup>3</sup> ) DIN ISO 787/10	2,8
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Feuchte ab Werk (%) DIN ISO 787/2 (max.)	0,5
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### Hellbezugswert DIN 5033

FMX	58
FMY	58
FMZ	65

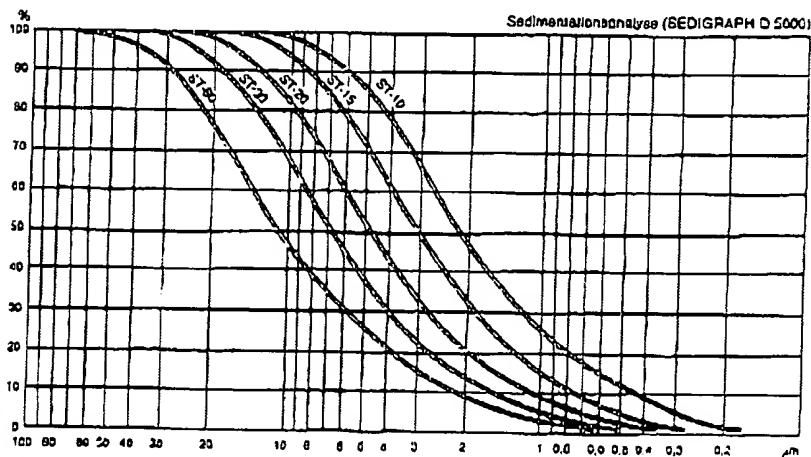


Foto: Rasterelektronenmikroskop (1cm = 1,4µm)

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ISO 9002 **BVQ APPROVED**

### Siebanalyse DIN 66165

Rückstand in % auf	60 µm	30 µm	20 µm	15 µm	10 µm
ST-60	2,0				
ST-30		2,0			
ST-20			2,0		
ST-15				2,0	
ST-10					2,0

### Stampfdichte (kg/dm<sup>3</sup>) DIN ISO 787/11

ST-60	ST-30	ST-20	ST-15	ST-10
0,87	0,77	0,55	0,47	0,38
0,60	0,53	0,41	0,40	0,36
31	35	38	41	44
10000	13800	21000	25500	29000

### Schüttdichte (kg/dm<sup>3</sup>) DIN 52110

### Ölzahl (g/100 g) DIN ISO 787/5

### Spez. Oberfläche Blaine 10

**Luzenac**  
**NAINTSCH**

NAINTSCH MINERALWERKE GmbH  
A-8045 Graz, Statteggerstraße 80  
Tel.: +43 316 32 32 30 Fax: +43 316 32 32 44

# Talk Naintsch A

Talk Naintsch A ist ein Magnesiumsilikathydrat mit ausgeprägter Plättchenstruktur (hohes Aspektverhältnis).

## Mineralogische Daten

### Chemische Daten

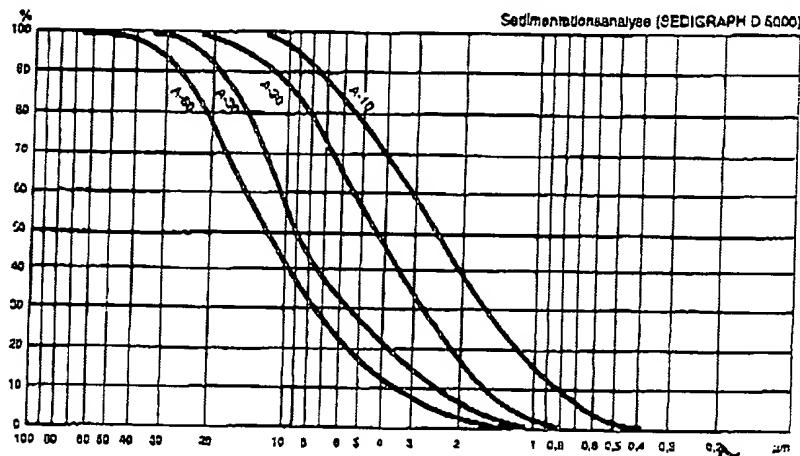
A5 : 1.83 DM/L<sub>4</sub>  
A60 : 1.10 DM/L<sub>4</sub>  
A3 : 2.30 DM/L<sub>4</sub>  
A30 : 1.20 DM/L<sub>4</sub>

## Physikalische Daten

### Talk

### Chemische Analyse (%)

SiO <sub>2</sub> .....	60
MgO .....	31,5
Al <sub>2</sub> O <sub>3</sub> .....	1
Fe <sub>2</sub> O <sub>3</sub> .....	0,8
CaO .....	0,6
Glühverlust (1050 °C, 1 h) .....	5,5
Säurelöslichkeit (%) (HCl 1 %, 20 °C, 20 min) .....	3
pH-Wert DIN ISO 787/9 .....	9,3
Härte (Mohs) .....	1
Dichte (kg/dm <sup>3</sup> ) DIN ISO 787/10 .....	2,8
Feuchte ab Werk (%) DIN ISO 787/2 .....	0,5



### Siebanalyse DIN 66165

#### Rückstand in % auf 60 µm

	A-60	A-30	A-20	A-10
30 µm	2,0	2,0	2,0	2,0
20 µm				
10 µm				
Hellbezugswert DIN 5033 FMX				
FMY	92	92	93	93
FMZ	92	92	93	93
Stampfdichte (kg/dm <sup>3</sup> )	91	91	92	92
DIN ISO 787/11	0,78	0,69	0,33	0,27
Schüttdichte (kg/dm <sup>3</sup> )				
DIN 52110	0,49	0,44	0,25	0,21
Ölzahl (g/100 g)				
DIN ISO 787/5	37	39	51	53
Spez. Oberfläche				
Blaine 10	10000	12500	24000	33000



Foto: Rasterelektronenmikroskop (1cm=1,4µm)

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ISO 9002 APPROVED



# Specialty MINERALS

## MICROTUFF® AG appearance grade talcs

*steatite-coated*

MICROTUFF® talc products are produced in Barretts, Montana from an extensive deposit of high quality talc ore. These products are characterized by a platy shape, closely controlled particle size distribution, and no detectable quantities of any of the asbestos minerals. This family includes a series of five products ranging from 6 microns top size to 44 microns top size.

They are specifically designed for polymer applications where color of the finished part is of critical importance. In addition to superior color, polyolefin compounds filled with MICROTUFF® AG talc products have enhanced long term heat stability when compared to compounds filled with unmodified talcs.

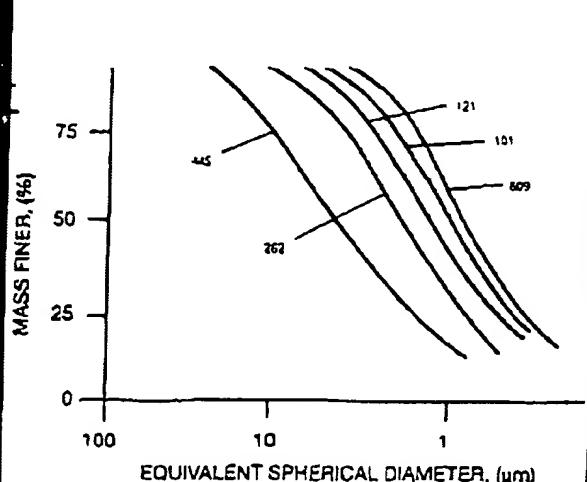
# Barretts Minerals Inc. Technical Data

## MICROTUFF® AG Talc

### Physical Properties (typical)

MICROTUFF® AG	609	101	121	262	445
Median Particle Size (microns)	0.8	1.0	1.3	2.3	5.5
Specific Gravity	2.8	2.8	2.8	2.8	2.8
Dry Brightness (Hunter Y, No value)	90	90	90	90	87
Bulk Density (ounces/in³) (grams/cc)	6.4 0.10	6.4 0.10	9.5 0.15	12.5 0.20	21 0.34
Tap Density (pounds/in³) (grams/cc)	20 0.32	22 0.35	22.6 0.36	34 0.54	49 0.78
Retention 325 Mesh %	nil	nil	nil	trace	0.6
pH Value	8.8	8.8	8.8	8.8	8.8

### CUMULATIVE MASS % FINER vs. DIAMETER



### Chemical Composition (typical)

Silicon Dioxide	SiO <sub>2</sub>	60%
Magnesium Oxide	MgO	33%
Aluminum Oxide	Al <sub>2</sub> O <sub>3</sub>	1.0%
Iron As	Fe <sub>2</sub> O <sub>3</sub>	1.2%
Loss on Ignition	L.O.I.	5.5%
Moisture (% weight loss @ 110° C)	H <sub>2</sub> O	<0.5%

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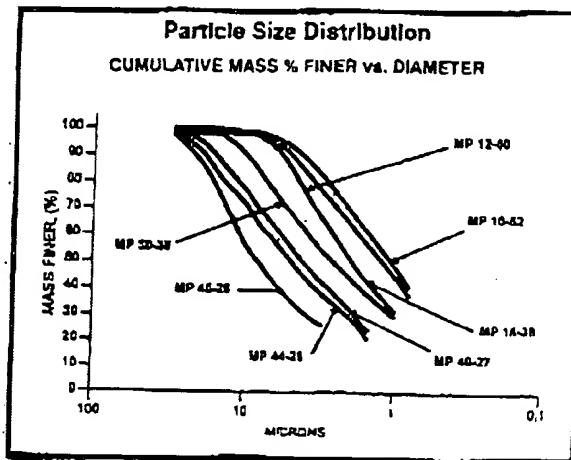
**MICROTALC™ talc****Technical Grade Talcs**

Specialty Minerals Inc. (SMI) MICROTALC™ technical grade talc products are produced by Barretts Minerals Inc., from an extensive deposit of high quality Montana talc ore. SMI's MICROTALC™ talc (Magnesium Silicate) products are designed for use in a number of applications including: thermoset & thermoplastic polymers, adhesives & sealants, caulk, putties & spackles and other numerous industrial applications. MICROTALC™ talc products are cost effective, chemically inert, platy, high brightness talcs used for reinforcement, improved weatherability and general improvements in mechanical properties.

This versatile line of high brightness, platy talcs is available in a full range of particle sizes to satisfy the requirements of most applications.

MICROTALC™ Technical Grade Talcs							
	MP 10-52	MP 12-50	MP 15-38	MP 30-36	MP 40-27	MP 44-26	MP 45-26
Median Particle Size (microns)	1.0	1.2	2.0	3.0	4.0	5.0	8.0
Brennan Fineness (minimum)	6.5	6.0	5.75	5.0	3.75	3.0	2.0
Conc. 325 Mesh, %	-	-	-	-	-	0.6	0.9
Dry Brightness (Hunter Y. Ad Value)	89	88.5	89	87	88	87	85
Oil Absorption	55	53	42	34	30	28	26
Bulk Density (pounds/ft³) (grams/cc)	6.4	7.5	12	16	20.5	21	23
Tap Density (pounds/ft³) (grams/cc)	0.10	0.12	0.19	0.26	0.33	0.34	0.37
pH	8.8	8.8	8.8	8.8	8.8	8.8	8.8
Specific Gravity	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Bulking Value	23.3	23.3	23.3	23.3	23.3	23.3	23.3
Wt/solid gal. (lbs.)							

Chemical Composition (typical)		
Silicon Dioxide	SiO <sub>2</sub>	61%
Magnesium Oxide	MgO	31%
Calcium Oxide	CaO	<0.5%
Aluminum Oxide	Al <sub>2</sub> O <sub>3</sub>	1%
Iron As	Fe <sub>2</sub> O <sub>3</sub>	<1.3%
Loss on Ignition	L.O.I.	5.5%
Moisture (% weight loss @ 110° C)	H <sub>2</sub> O	<0.5%



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Lakewood, CA - (800) 255-5832  
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Technical Data ▼ **MICROTALC® Technical Grade Talcs**

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